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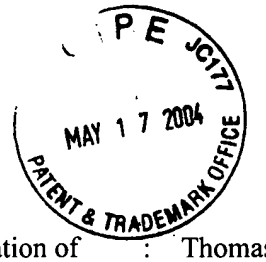

IFW AF/1731

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Attorney Docket No. P20418

In re application of : Thomas THORÖE SCHERB et al

Mail Stop Amendment

Serial No. : 09/769,462 Group Art Unit: 1731

Filed : January 26, 2001 Examiner: P. Chin

For : MACHINE AND PROCESS FOR PRODUCING A TISSUE WEB

Mail Stop Amendment
COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

Transmitted herewith is an Appeal Brief Under 37 C.F.R. § 1.192 (in trip.) in the above-captioned application.

___ Small Entity Status of this application under 37 C.F.R. 1.9 and 1.27 has been established by a previously filed statement.
___ A verified statement to establish small entity status under 37 C.F.R. 1.9 and 1.27 is enclosed.
___ A Request for Extension of Time.
___ No Additional Fee.
___
___

The fee has been calculated as shown below:

Claims After Amendment	No. Claims Previously Paid For	Present Extra	Small Entity		Other Than A Small Entity	
			Rate	Fee	Rate	Fee
Total Claims: 52	*52	0	x 9=	$	x 18=	$0.00
Indep. Claims: 3	**3	0	x 43=	$	x 86=	$0.00
No. of Dependent Claims.			145=	$	+290=	$0.00
Extension Fees for Month						$0.00
Appeal Brief fee				$		$10.00
			Total:	$	Total:	$10.00

*If less than 20, write 20
**If less than 3, write 3
___ Please charge my Deposit Account No. 19-0089 in the amount of $____.
_X_ A Check in the amount of $**10.00** to cover the filing/extension fee is included.
_X_ The U.S. Patent and Trademark Office is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 19-0089.
_X_ Any additional filing fees required under 37 C.F.R. 1.16.
_X_ Any patent application processing fees under 37 C.F.R. 1.17, including any required extension of time fees in any concurrent or future reply requiring a petition for extension of time for its timely submission (37 CFR 1.136)(a)(3).

Neil F. Greenblum
Reg. No. 28, 394 55,043

SIPE JC12
MAY 17 2004
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants	:	Thomas THORÖE SCHERB et al.	Confirmation No.: 5458
Appln. No.	:	09/769,462	Group Art Unit: 1731
Filed	:	January 26, 2001	Examiner: P. Chin
For	:	MACHINE AND PROCESS FOR PRODUCING A TISSUE WEB	

APPEAL BRIEF UNDER 37 C.F.R. § 1.192

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is from the Examiner's decision to finally reject claims 1 – 10 and 13 – 54 as set forth in the Final Official Action of October 16, 2003.

A Notice of Appeal in response to the October 16, 2003 Final Office Action was filed January 16, 2004, along with a Two-month Extension of Time. Further, the instant Appeal Brief is being timely submitted within two-months of the Notice of Appeal, i.e., by May 17, 2004 (May 16, 2004 being a Sunday).

As Appellant has already paid $320.00 for the filing of an Appeal Brief on February 3, 2003, Appellant submits that the entire fee under 37 C.F.R. 1.17(c) in the amount of $ 330.00 for the filing of the Appeal Brief is not necessary. Accordingly, Appellants submit herewith a check including the amount of $10.00, to make a total of $330.00 submitted in the instant application for fees related to the filing of the Appeal Brief. However, if for any reason the necessary fee is not associated with this file, or if this fee is deemed insufficient to complete

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the requirements for submission of the Appeal Brief, the Commissioner is authorized to charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No. 19 - 0089.

This appeal brief is being submitted in triplicate, pursuant to 37 C.F.R. 1.192(a).

(1) REAL PARTY IN INTEREST

The real party in interest is Voith Paper Patent GmbH by an assignment recorded in the U.S. Patent and Trademark Office on March 7, 2001 at Reel 011570 and Frame 0623.

(2) RELATED APPEALS AND INTERFERENCES

No related appeals and/or interferences are pending.

(3) STATUS OF THE CLAIMS

Claims 1 – 10 and 13 – 54, the only claims pending in the instant application, stand finally rejected.

(4) STATUS OF THE AMENDMENTS

No amendments have been presented subsequent to the Final Office Action.

(5) SUMMARY OF THE INVENTION

The instant invention is directed to relates to a machine and process for producing a tissue web having a forming area including at least one rotating continuous dewatering wire. (Specification paragraph [0001]). The instant invention includes an arrangement and process in which a shoe press and at least one dewatering wire with zonally varied (different) wire permeability are provided in the forming area to achieve an arrangement of fibers of a tissue web, even at high machine speeds, so that the water absorption capacity, water retention

capacity, water absorption rate, and specific volume (bulk) are increased or improved in as cost-effective a manner as possible. (Specification paragraphs [0004] - [0005]).

Attempts have been made to influence the quality parameters of a tissue web, e.g., water absorption capacity, water retention capacity, and water absorption rate, by configuring the surface structure of the web. In particular, these prior attempts have utilized "embossing wires" or "embossing felts," however, these wires or felts emboss their own surface structure onto the already formed tissue web. Further, the tissue web is loaded with pressure, which counteracts the desired high volume (bulk). (Specification paragraph [0003])

To avoid the above-noted drawbacks of the prior art, the instant invention, directed to a machine and process for producing a tissue web 12, includes former 10, as shown in Figures 1 and 2. Moreover, in the forming area, and preferably in the initial dewatering area, at least one dewatering wire with zonally varied or different wire permeability is provided in combination with a shoe press. Former 10 includes two continuous rotating dewatering belts 14 and 16 that converge, forming a stock entry gap 18, and are subsequently conducted over a forming element, e.g., forming roll 20. According to the invention, at least one of the two dewatering wires 14 and 16 is provided as a wire with zonally different wire permeability. If necessary, a conditioning device, such as, in particular, a wire cleaning device 50, can be assigned to each DSP wire. (Specification paragraphs [0053] - [0057]; and Figures 1 and 2).

The dewatering wires with zonally different wire permeability can include, e.g., a fabric formed by filling and warp yarns, and the zones of different wire permeability can be produced, e.g., using weaving yarns of varied diameter and/or varied weave pattern. It is

disclosed that a suitable wire of zonally different permeability is described in PCT/GB99/02684, the disclosure of which is expressly incorporated by reference in the instant application in its entirety. By way of example, it is noted that the wires in question can include, in particular, a fabric in which yarns provided in one or more planes and running in a first direction are woven together with yarns running in a second direction, such that a grid is formed that separates a number of systematically distributed areas of specified configuration from one another and fixes them accordingly, with the systematically distributed areas each including at least three yarns running in the one direction and at least three yarns running in the other direction. The yarns can be in particular filling yarns and warp yarns. (Specification paragraphs [0068] - [0069]; and Figures 1 and 2).

An exemplary illustration of the weave pattern of the wire with zonally different wire permeability is depicted in Figure 4, in which a repeating weave pattern diagram includes ten warp yarns and ten filling yarns. In the area of the hatched squares, the filling yarn lies beneath the warp yarn. In the area of the light squares, on the other hand, the filling yarn lies above the warp yarn. Depending on the circumstances of each case, the one or else the other side of the weave pattern diagram can lie outside. Moreover, hatched areas form a grid 62, by which a number of systematically distributed zones (areas) 64 of specified configuration are separated from one another and fixed accordingly. As shown in Figure 4, the dimensions of the zones are depicted as Az, which can represent areas of high permeability or areas of low permeability, however, it is not necessary that these dimensions are the same. In any event, Az represents the length and/or width of zones having a permeability different than

that of the other zones. (Specification paragraph [0074] - [0075]).

(6) **ISSUES**

(A) Whether Claims 1 – 10 and 13 – 54 are Improperly Rejected Under 35 U.S.C. § 103(a) as Unpatentable Over KAMPS (International Publication No. WO 96/35018) [hereinafter "KAMPS"] in view of SCHIEL (U.S. Patent No. 6,004,429) or BLUHM et al. (U.S. Patent No. 5,556,511) [hereinafter "BLUHM"].

(7) **GROUPING OF CLAIMS**

For the purpose of this appeal, Appellants submit that none of the claims stand or fall together. Therefore, each of claims 1 – 10 and 13 – 54 are separately patentable for the reasons set forth hereinbelow.

(8) **ARGUMENT**

(A) The Rejection of Claims 1 – 10 and 13 – 54 Under 35 U.S.C. § 103(a) Over KAMPS in view of SCHIEL or BLUHM is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.

The Examiner asserts that KAMPS shows a process for making tissue paper having a decorative pattern using a decorative pattern on the forming fabric in a twin wire former. The Examiner further asserts that SCHIEL discloses a tissue maker using a crescent former using a press nip having a length of between 50 mm and 120 mm and a press force of between 2.5 MPa and 5 MPa, and that it would have been obvious to modify KAMPS to include such an arrangement. Further, the Examiner asserts that BLUHM shows a device for transferring a wet web to a heated creping roll to improve bulk and softness, and that it would

have been obvious to modify KAMPS in this manner. Appellants traverse the Examiner's assertions.

As set forth in paragraph [0004] of Appellants' disclosure, the combination of features recited in the pending claims is directed to an apparatus and process designed to improve physical characteristics of the web, e.g., water absorption capacity, water absorption rate, water retention capacity, specific volume. In particular, these physical properties of the web are improved by to the combination of features including a forming region having at least one circulating, continuous dewatering wire comprising *at least two zones having different wire permeabilities*, which is neither taught nor suggested by the applied art of record.

Therefore, Appellants' independent claim 1 recites, *inter alia*, a forming area including at least one rotating continuous *dewatering wire with a plurality of zones having different wire permeabilities*, and at least one shoe press, such that the at least one shoe press has a press nip length, viewed in a belt travel direction, greater than about 80 mm and has a pressure profile over said press nip length with a *maximum pressing pressure less than or equal to about 2 MPa*. Independent claim 22 recites, *inter alia*, dewatering the tissue web with at least the at least one continuous *dewatering wire with said plurality of zones having different wire permeabilities*, and pressing the tissue web in the at least one shoe press, which has a press nip length, viewed in a belt travel direction, greater than about 80 mm and which is located downstream of the forming area, such that a pressure profile over the press nip length has a *maximum pressing pressure less than or equal to about 2 MPa*. Appellants' independent claim 39 recites, *inter alia*, a forming element, at least two rotating continuous

dewatering wires, in which at least one of said two rotating continuous *dewatering wires has a plurality of zones with different wire permeabilities*, arranged over said forming element, as an outer wire not in contact with said forming element and as an inner wire, and at least one shoe press arranged downstream, relative to a wire travel direction, from said forming element, such that the at least one shoe press has a press nip length, viewed in a belt travel direction, greater than about 80 mm and has a pressure profile over said press nip length with a *maximum pressing pressure less than or equal to about 2 MPa*. Appellants submit that no proper combination of KAMPS in view of SCHIEL or BLUHM teaches or suggests at least the above-noted features.

In contrast to the instant invention, KAMPS is directed to a process and apparatus in which a special forming fabric is used to form *decorative tissue* by *embossing* or *imprinting* the decoration in the web surface. This embossing or imprinting is achieved by impeding drainage of water relative to other areas of the forming fabric, which, as noted by the Examiner, results in different basis weights in the drainage impeding area and in the other areas. While the Examiner notes that basis weight is a physical characteristic of the web, Appellants submit that, in contrast to the instant invention, the different basis weights in KAMPS is *not* the result of a dewatering wire having a plurality of zones having different wire permeabilities, as recited in the pending claims. Moreover, Appellants note that KAMPS fails to provide any teaching or suggestion of the recited maximum pressure recited in at least independent claims 1, 22, and 39.

In contrast to the instant invention, KAMPS fails to provide any teaching or

suggestion that the continuous wire includes a *plurality of zones having different wire permeabilities*, but instead teaches that drainage is impeded through the use of additional filaments, coatings, films, appliqués, etc. In other words, KAMPS merely discloses the formation of zones to effect different basis weight as a result of impeding dewatering in various zones, without any specific teaching or suggestion that the continuous wire of KAMPS has zones of different wire permeabilities, as recited in at least Appellants' independent claims.

Thus, Appellants submit that, contrary to the Examiner's assertions, KAMPS fails to provide any teaching or suggestion of a forming area including at least one rotating continuous dewatering wire with a plurality of zones having different wire permeabilities, as recited in the pending claims. Moreover, as acknowledged by the Examiner, Appellants note that KAMPS also fails to teach or suggest the recited press shoe and the structural features related to the press shoe.

To address the defects of KAMPS noted by the Examiner, i.e., the failure to teach or suggest a press shoe and the specifics of the press shoe, the Examiner has applied the teachings of SCHIEL and BLUHM, both of which disclose press shoes in a tissue forming apparatus. However, neither SCHIEL nor BLUHM provide any teaching or suggestion of forming a patterned web or of a special dewatering wire design for embossing or imprinting the web, as taught by KAMPS.

In establishing a prima facie case of obviousness under 35 U.S.C. §103, it is incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would

have found it obvious to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See *Ex parte Clapp*, 227 USPQ 972 (BPAI 1985) To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Appellants' disclosure. See, for example, *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Notwithstanding the Examiner's assertions that it would have been obvious to modify KAMPS to utilize the press shoe of either SCHIEL or BLUHM, Appellants contend that this is not a reason *why* one of ordinary skill in the art would have been led to modify the device of KAMPS. It is respectfully submitted that the courts have long held that it is impermissible to use Appellants' claimed invention as an instruction manual or "template" to piece together teachings of the prior art so that the claimed invention is purportedly rendered obvious. See *In re Fritch*, 972 R.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

In this regard, Appellants submit that neither SCHIEL nor BLUHM teach or suggest pressing a *patterned or embossed tissue web*, as produced according to KAMPS, with a press shoe. Moreover, Appellants note that, as none of the applied art of record provides any teaching or suggestion for pressing a patterned or embossed tissue web with a press shoe during the production of the patterned or embossed tissue web, the art of record fails to provide any teaching or suggestion for the modification asserted by the Examiner.

Still further, Appellants submit that, even assuming, *arguendo*, that one ordinarily skilled in the art were motivated to utilize the press shoe of SCHIEL or BLUHM during the

formation of the patterned or embossed tissue web of KAMPS, the art of record fails to provide any teaching or suggestion that the desired pattern or embossed imprinted design would be preserved on the web after it has been pressed in the elongated shoe press of either SCHIEL or BLUHM. Thus, Appellants submit that the art of record fails to teach or suggest the requisite motivation or rationale for modifying KAMPS in the manner asserted by the Examiner.

Because the art fails to provide any teaching or suggestion for pressing an embossed or imprinted web in the extended nip shoe presses of either SCHIEL or BLUHM, and because the art certainly fails to provide any suggestion of successfully pressing such a web while maintaining the intended pattern on the web, Appellants submit that the art of record fails to provide the requisite motivation or rationale for modifying KAMPS in the manner asserted by the Examiner.

Therefore, Appellants submit that, as there is no teaching or suggestion in the art of record that KAMPS, as modified by either SCHIEL or BLUHM, would continue to operate in its intended manner, the asserted modification would not have been obvious to one ordinarily skilled in the art.

Further, Appellants note rejections based on 35 U.S.C. §103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis.

See *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984):

> [t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

Appellants submit that, as there is no teaching or suggestion in the art of record with regard to what effect the elongated nip press would have on the embossed or imprinted design of KAMPS, Appellants submit that the only reasonable explanation for modifying KAMPS in the manner suggested by the Examiner is the use of improper hindsight following review of Appellants' specification and claims.

Appellants further note that, like KAMPS, neither SCHIEL nor BLUHM teach or suggest any subject matter related to the press nip length and/or the pressure profile having maximum pressing pressure over the length of the nip. In particular, Appellants note that neither SCHIEL nor BLUHM provide any teaching or suggestion for modifying the structure of KAMPS, and, particularly, any structure for forming a patterned or embossed tissue web, in any manner that would render the above-noted features obvious.

While acknowledging that SCHIEL discloses a nip length between 50 mm and 120 mm, Appellants note that SCHIEL expressly recites that the maximal pressure within such a nip length should be between 2.5 MPa and 5 MPa. Thus, Appellants note that SCHIEL fails to teach or suggest operating the shoe press to exert a maximum pressing pressure of less than or equal to 2 MPa, as recited in at least independent claims 1, 22, and 39.

Appellants now refer to the Examiner's assertions that the term "about" is not defined by the instant application, such that it is not apparent whether a difference of ±1 MPa would be about 2.5 MPa." Appellants note that the term "about" is a recognition of certain inherent variance or engineering tolerance in measuring or determining the pressure in the nip. However, as ±1 MPa would result in a 60% decrease or 40% increase in the 2.5 MPa pressure disclosed by SCHIEL, and would result in a 50% increase or decrease from the 2.0 MPa recited in the pending claims, Appellants submit that such variance would not be deemed an inherent variance or engineering tolerance. Thus, in either regard, Appellants note that a change of ±1 MPa, relative to the minimum pressure disclosed by SCHIEL or the maximal pressure recited in the pending claims, would *not* have been "about" the same.

In this same regard, Appellants submit that, as the minimum pressure of 2.5 MPa in SCHIEL would have to be decreased by 20% to correspond to the maximum pressure recited in the pending claims, Appellants submit that there is no teaching or suggestion that 2.5 MPa is "about" 2.0 MPa.

Moreover, while SCHIEL indicates that the above-noted range (having a minimum pressure of 2.5 MPa) is advantageous "if a high production capacity is what is sought," Appellants note that SCHIEL fails to provide any teaching or suggestion as to what parameters, if any, would require adjustment if high production capacity is not sought. While the Examiner has asserted that it would have been obvious that, if high production capacity is not sought, one would reduce the pressure to 2.0 MPa or below, there is no teaching or suggestion in the art of record to support the Examiner's assertions.

In fact, SCHIEL fails to provide any teaching or suggestion of operation outside of the disclosed range, and certainly fails to suggest operating the press at a pressure significantly below the lower limit of the range. Appellants also note that, because SCHIEL provides no guidance for operating outside of the disclosed pressure range, this document does not provide any disclosure as to what output one could expect if operated within the range asserted by the Examiner, and certainly provides not suggestion that operation within such a range would successfully dewater the web to the extent necessary in SCHIEL. Accordingly, Appellants submit that, as the Examiner's asserted modification of SCHIEL is contrary to express teachings of the document, it is not apparent that the lower maximum pressing pressure would be sufficient to enable the press of SCHIEL to operate in its intended manner.

As the applied art fails to teach or suggest that the physical characteristics of the resulting web can be improved by the recited dewatering wire and the recited nip length and maximum pressing pressure range over the nip length recited in at least the independent claims, Appellants submit that the art of record fails to provide any teaching or suggestion of the above-noted features. Therefore, Appellants submit that the applied documents fail to teach or suggest the combination of features recited in at least independent claims 1, 22, and 39, and that the rejection under 35 U.S.C. §103(a) is improper and should be withdrawn.

Because none of the applied documents teach or suggest at least the above-noted features of the invention, Appellants submit that no proper combination of the applied documents can render unpatentable the combination of features recited in at least independent claims 1, 22, and 39.

Appellants further note that the Examiner cannot simply ignore the structure and arrangement of the recited elements merely because a function is recited. In particular, the pending claims recite a press shoe having a defined length range, and that this shoe is arranged to provide a pressure profile over the length of the nip having the recited maximum pressure. Thus, because the claim recites an arrangement of the shoe, such that a pressure profile having a maximum pressure of less than or equal to 2.0 MPa is provided by the shoe, Appellants submit that the claims are not merely functional language not entitled to patentable weight.

Moreover, even assuming, *arguendo*, that one were to find it obvious to modify either KAMPS in view of SCHIEL or BLUHM (which Appellants submit one would not), Appellants further submit that dependent claims 2 - 10, 13 - 21, 23 - 38, and 40 - 54, which further define the instant invention, and, therefore, further distinguish the invention over any proper combination of KAMPS in view of SCHIEL or BLUHM, recite additional subject matter that provides a separate basis of patentability. In particular, because claims 2 - 10, 13 - 21, 23 - 38, and 40 - 54 recite additional features further defining the present invention that are neither taught nor suggested in any proper combination of KAMPS in view of SCHIEL or BLUHM. In particular, Appellants note that the applied documents of record fail to teach or suggest, *inter alia*, a former including a *forming element* and *two rotating continuous dewatering belts*, said two rotating continuous dewatering belts being arranged to converge to form a stock entry gap and being conducted over said forming element as an outer belt, which does not contact said forming element, and as an inner belt, wherein *at least one of*

said outer and said inner belts comprises said at least one rotating continuous dewatering wire with said plurality of zones having different wire permeabilities, as recited in claim 2; said forming element comprises a forming roll, as recited in claim 3; said shoe press comprises a *separate unit arranged behind*, in the belt travel direction, a unit including said forming element and said two dewatering belts, as recited in claim 4; the tissue web is carried by one of the two dewatering belts subsequent to said forming element, and the tissue web and said one dewatering *belt is guided through said shoe press*, as recited in claim 5; said former comprises a *twin wire former*, as recited in claim 6; said former comprises a *crescent former*, and wherein said outer belt comprises said *at least one dewatering wire with said plurality of zones having different wire permeabilities and said inner belt comprises a felt belt*, as recited in claim 7; said shoe press comprises a *shoe press unit and an opposing element*, as recited in claim 8; said *opposing element comprises a drying cylinder*, as recited in claim 9; said *opposing element comprises a Yankee cylinder*, as recited in claim 10; said *press nip length is less than about 200 mm*, as recited in claim 13; said *press nip length is a maximum of about 150 mm*, as recited in claim 14; a drying zone in which the tissue web is acted upon *at least partially by pressurized displacement gas*, as recited in claim 15; said at least one dewatering wire with said *plurality of zones having different wire permeabilities is located in an initial dewatering area*, as recited in claim 16; said at least one dewatering wire with said *plurality of zones having different wire permeabilities comprises a fabric formed by filling and warp yarns*, as recited in claim 17; said at least one dewatering wire with said plurality of zones having different wire permeabilities comprises a fabric *formed only by*

filling and warp yarns, as recited in claim 18; zones of different wire permeability of said at least one dewatering wire are produced by *at least one of weaving yarns of different diameter and different weave pattern*, as recited in claim 19; a *conditioning device* assigned to said at least one dewatering wire with said plurality of zones having different wire permeabilities, as recited in claim 20; said conditioning device comprises a *wire cleaning device*, as recited in claim 21; the tissue machine further including a *former with a forming element* and *two rotating continuous dewatering belts* arranged to converge to form a stock entry gap and then guided over the forming element as an outer belt, which does not contact the forming element, and as an inner belt, such that at least one of said outer and said inner belts comprises said at least one rotating continuous dewatering wire with the *plurality of zones having different wire permeabilities*, and said process further comprises forming the tissue web between the inner and outer belts, and guiding the inner and outer belts and tissue web over the forming element, as recited in claim 23; the forming element comprises a forming roll, and said process further comprises guiding the inner and outer belts and the tissue web over the forming roll, as recited in claim 24; the *shoe press is arranged as separate from, and behind in a belt travel direction, a unit including the forming element* and the two dewatering belts, as recited in claim 25; carrying, after the forming element and on one of the two dewatering belts, the tissue web, and *guiding the tissue web and the one dewatering belt through the shoe press*, as recited in claim 26; said former comprises a *twin wire former*, as recited in claim 27; said former comprises a crescent former, and the outer belt comprises the at least one dewatering wire with the plurality of zones having different wire permeabilities,

and the inner belt comprises a felt belt, as recited in claim 28; dewatering at a *machine speed greater than about 1300 m/min*, as recited in claim 29; dewatering at a *machine speed greater than about 1500 m/min*, as recited in claim 30; dewatering at a *machine speed greater than about 1800 m/min*, as recited in claim 31; *dewatering the tissue web, in an initial dewatering area, with at least the at least one dewatering wire with the plurality of zones having different wire permeabilities*, as recited in claim 32; the at least one dewatering wire with the *plurality of zones having different wire permeabilities comprises a fabric formed by filling and warp yarns*, as recited in claim 33; the at least one dewatering wire with the plurality of zones having different wire permeabilities comprises a fabric *formed only by* filling and warp yarns, as recited in claim 34; the at least one dewatering wire with the *plurality of zones having different wire permeabilities comprises zones of different wire permeability formed by at least one of weaving yarns of different diameter and different weave pattern*, as recited in claim 35; the at least one dewatering wire with the plurality of zones having different wire permeabilities is *located in an area in which solids content of the tissue web is less than about 20%*, as recited in claim 36; the at least one dewatering wire with the plurality of zones having different wire permeabilities is *located in an area in which solids content of the tissue web is less than about 12%*, as recited in claim 37; the at least one dewatering wire with the plurality of zones having different wire permeabilities is *located in an initial sheet forming area having a solids content of less than about 6%*, as recited in claim 38; said forming element comprises a forming roll, as recited in claim 40; the at least one dewatering wire with said plurality of zones with different wire permeabilities comprises

a plurality of zones in which *each zone has a maximum extension of less than about 5 mm*, as recited in claim 41; said *maximum extension of each said zone is less than about 3 mm*, as recited in claim 42; said former comprises a *crescent former*, and wherein said outer belt comprises said at least one dewatering wire with said plurality of zones with different wire permeabilities and said inner belt comprises a felt belt, as recited in claim 43; a *suction zone* located within a loop of said inner belt, and a *conditioning device* associated with said outer belt, as recited in claim 44; said *suction zone is located in said forming roll*, as recited in claim 45; an *apparatus to one of control or regulate said suction zone*, as recited in claim 46; said *suction zone comprises at least two suction zones separated in a belt run direction*, as recited in claim 47; an *apparatus to one of control or regulate said at least two suction zones*, as recited in claim 48; said *zones of different wire permeabilities are formed by warp and weft threads*, as recited in claims 49, 51, and 53; and said *zones of different wire permeabilities are structured to provide at least two different dewatering speeds*, as recited in claims 50, 52, and 54.

Accordingly, Appellants request that the Board reverse the Examiner's decision to finally reject claims 1 – 10 and 13 – 54 under 35 U.S.C. § 103(a)that the application be remanded to the Examiner for withdrawal of the rejection over KAMPS in view of SCHIEL or BLUHM and an early allowance of all claims on appeal.

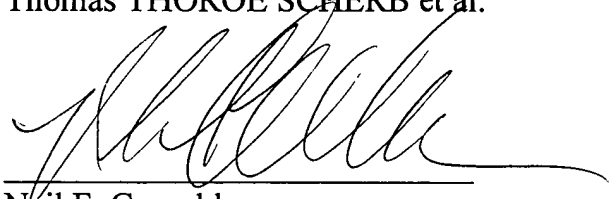
(B) Conclusion

Appellants submit that claims 1 – 10 and 13 – 54 are patentable under 35 U.S.C. § 103(a) over KAMPS in view of SCHIEL or BLUHM. Accordingly, Appellants respectfully

request that the Board reverse the Examiner's decision to finally reject claims 1 – 10 and 13 – 54 under 35 U.S.C. § 103(a) and remand the application to the Examiner for withdrawal of the rejection.

Thus, Appellants respectfully submit that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. § 103(a), and that the present application and each pending claim are allowable over the prior art of record.

Respectfully submitted,
Thomas THORÖE SCHERB et al.



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Attachments: Appendix A: Claims on Appeal

APPENDIX A

CLAIMS ON APPEAL

1. (Previously presented) A machine for producing a tissue web comprising:

a forming area including at least one rotating continuous dewatering wire with a plurality of zones having different wire permeabilities; and

at least one shoe press located downstream of said forming area, with respect to a web travel direction,

wherein said at least one shoe press has a press nip length, viewed in a belt travel direction, greater than about 80 mm and has a pressure profile over said press nip length with a maximum pressing pressure less than or equal to about 2 MPa.

2. (Previously presented) The machine in accordance with claim 1, further comprising a former including a forming element and two rotating continuous dewatering belts;

said two rotating continuous dewatering belts being arranged to converge to form a stock entry gap and being conducted over said forming element as an outer belt, which does not contact said forming element, and as an inner belt,

wherein at least one of said outer and said inner belts comprises said at least one rotating continuous dewatering wire with said plurality of zones having different wire permeabilities.

3. (Original) The machine in accordance with claim 2, wherein said forming element comprises a forming roll.

4. (Original) The machine in accordance with claim 3, wherein said shoe press comprises a separate unit arranged behind, in the belt travel direction, a unit including said forming element and said two dewatering belts.

5. (Original) The machine in accordance with claim 3, wherein the tissue web is carried by one of the two dewatering belts subsequent to said forming element, and the tissue web and said one dewatering belt is guided through said shoe press.

6. (Original) The machine in accordance with claim 2, wherein said former comprises a twin wire former.

7. (Previously presented) The machine in accordance with claim 2, wherein said former comprises a crescent former, and wherein said outer belt comprises said at least one dewatering wire with said plurality of zones having different wire permeabilities and said inner belt comprises a felt belt.

8. (Original) The machine in accordance with claim 1, wherein said shoe press comprises a shoe press unit and an opposing element.

9. (Original) The machine in accordance with claim 8, wherein said opposing element comprises a drying cylinder.

10. (Original) The machine in accordance with claim 8, wherein said opposing element comprises a Yankee cylinder.

Claims 11 and 12. (Canceled).

13. (Previously presented) The machine in accordance with claim 1, wherein said press nip length is less than about 200 mm.

14. (Previously presented) The machine in accordance with claim 1, wherein said press nip length is a maximum of about 150 mm.

15. (Original) The machine in accordance with claim 1, further comprising a drying zone in which the tissue web is acted upon at least partially by pressurized displacement gas.

16. (Previously presented) The machine in accordance with claim 1, wherein said at least one dewatering wire with said plurality of zones having different wire permeabilities is located in an initial dewatering area.

17. (Previously presented) The machine in accordance with claim 1, wherein said at least one dewatering wire with said plurality of zones having different wire permeabilities comprises a fabric formed by filling and warp yarns.

18. (Previously presented) The machine in accordance with claim 17, wherein said at least one dewatering wire with said plurality of zones having different wire permeabilities comprises a fabric formed only by filling and warp yarns.

19. (Previously presented) The machine in accordance with claim 17, wherein zones of different wire permeability of said at least one dewatering wire are produced by at least one of weaving yarns of different diameter and different weave pattern.

20. (Previously presented) The machine in accordance with claim 1, further comprising a conditioning device assigned to said at least one dewatering wire with said plurality of zones having different wire permeabilities.

21. (Original) The machine in accordance with claim 20, wherein said

conditioning device comprises a wire cleaning device.

22. (Previously presented) A process for producing a tissue web in a tissue machine having a forming area including at least one rotating continuous dewatering wire with a plurality of zones having different wire permeabilities and at least one shoe press, the process comprising:

dewatering the tissue web with at least the at least one continuous dewatering wire with the plurality of zones having different wire permeabilities; and

pressing the tissue web in the at least one shoe press, which has a press nip length, viewed in a belt travel direction, greater than about 80 mm and which is located downstream of the forming area, such that a pressure profile over the press nip length has a maximum pressing pressure less than or equal to about 2 MPa.

23. (Previously presented) The process in accordance with claim 22, wherein the tissue machine further including a former with a forming element and two rotating continuous dewatering belts arranged to converge to form a stock entry gap and then guided over the forming element as an outer belt, which does not contact the forming element, and as an inner belt, such that at least one of said outer and said inner belts comprises said at least one rotating continuous dewatering wire with the plurality of zones having different wire permeabilities, and said process further comprises:

forming the tissue web between the inner and outer belts; and

guiding the inner and outer belts and tissue web over the forming element.

24. (Original) The process in accordance with claim 23, wherein the forming

element comprises a forming roll, and said process further comprises:

guiding the inner and outer belts and the tissue web over the forming roll.

25. (Original) The process in accordance with claim 23, wherein the shoe press is arranged as a separate from, and behind in a belt travel direction, a unit including the forming element and the two dewatering belts.

26. (Original) The process in accordance with claim 23, further comprising:

carrying, after the forming element and on one of the two dewatering belts, the tissue web; and

guiding the tissue web and the one dewatering belt through the shoe press.

27. (Original) The process in accordance with claim 23, wherein said former comprises a twin wire former.

28. (Previously presented) The process in accordance with claim 23, wherein said former comprises a crescent former, and the outer belt comprises the at least one dewatering wire with the plurality of zones having different wire permeabilities, and the inner belt comprises a felt belt.

29. (Original) The process in accordance with claim 22, further comprising:

dewatering at a machine speed greater than about 1300 m/min.

30 (Original) The process in accordance with claim 22, further comprising:

dewatering at a machine speed greater than about 1500 m/min.

31. (Original) The process in accordance with claim 22, further comprising:

dewatering at a machine speed greater than about 1800 m/min.

32. (Previously presented) The process in accordance with claim 22, further comprising dewatering the tissue web, in an initial dewatering area, with at least the at least one dewatering wire with the plurality of zones having different wire permeabilities.

33. (Previously presented) The process in accordance with claim 22, wherein the at least one dewatering wire with the plurality of zones having different wire permeabilities comprises a fabric formed by filling and warp yarns.

34. (Previously presented) The process in accordance with claim 33, wherein the at least one dewatering wire with the plurality of zones having different wire permeabilities comprises a fabric formed only by filling and warp yarns.

35. (Previously presented) The process in accordance with claim 22, wherein the at least one dewatering wire with the plurality of zones having different wire permeabilities comprises zones of different wire permeability formed by at least one of weaving yarns of different diameter and different weave pattern.

36. (Previously presented) The process in accordance with claim 22, wherein the at least one dewatering wire with the plurality of zones having different wire permeabilities is located in an area in which solids content of the tissue web is less than about 20%.

37. (Previously presented) The process in accordance with claim 36, wherein the at least one dewatering wire with the plurality of zones having different wire permeabilities is located in an area in which solids content of the tissue web is less than about 12%.

38. (Previously presented) The process in accordance with claim 36, wherein the at least one dewatering wire with the plurality of zones having different wire permeabilities is located in an initial sheet forming area having a solids content of less than about 6%.

39. (Previously presented) An tissue paper former comprising:

a forming element;

at least two rotating continuous dewatering wires, in which at least one of said two rotating continuous dewatering wires has a plurality of zones with different wire permeabilities, arranged over said forming element, as an outer wire not in contact with said forming element and as an inner wire; and

at least one shoe press arranged downstream, relative to a wire travel direction, from said forming element,

wherein said at least one shoe press has a press nip length, viewed in a belt travel direction, greater than about 80 mm and has a pressure profile over said press nip length with a maximum pressing pressure less than or equal to about 2 MPa.

40. (Original) The tissue paper former in accordance with claim 39, wherein said forming element comprises a forming roll.

41. (Previously presented) The tissue paper former in accordance with claim 40, wherein the at least one dewatering wire with said plurality of zones with different wire permeabilities comprises a plurality of zones in which each zone has a maximum extension of less than about 5 mm.

42. (Original) The tissue paper former in accordance with claim 41, wherein said maximum extension of each said zone is less than about 3 mm.

43. (Previously presented) The tissue paper former in accordance with claim 40, wherein said former comprises a crescent former, and wherein said outer belt comprises said at least one dewatering wire with said plurality of zones with different wire permeabilities and said inner belt comprises a felt belt.

44. (Original) The tissue paper former in accordance with claim 43, further comprising a suction zone located within a loop of said inner belt; and

a conditioning device associated with said outer belt.

45. (Original) The tissue paper former in accordance with claim 44, wherein said suction zone is located in said forming roll.

46. (Original) The tissue paper former in accordance with claim 45, further comprising an apparatus to one of control or regulate said suction zone.

47. (Original) The tissue paper former in accordance with claim 45, wherein said suction zone comprises at least two suction zones separated in a belt run direction.

48. (Original) The tissue paper former in accordance with claim 47, further comprising an apparatus to one of control or regulate said at least two suction zones.

49. (Previously presented) The machine in accordance with claim 1, wherein said zones of different wire permeabilities are formed by warp and weft threads.

50. (Previously presented) The machine in accordance with claim 1, wherein said zones of different wire permeabilities are structured to provide at least two different

dewatering speeds.

51. (Previously presented) The process in accordance with claim 22, wherein said zones of different wire permeabilities are formed by warp and weft threads.

52. (Previously presented) The process in accordance with claim 22, wherein said zones of different wire permeabilities are structured to provide at least two different dewatering speeds.

53. (Previously presented) The tissue paper former in accordance with claim 39, wherein said zones of different wire permeabilities are formed by warp and weft threads.

54. (Previously presented) The tissue paper former in accordance with claim 39, wherein said zones of different wire permeabilities are structured to provide at least two different dewatering speeds.